Stormwater Group Meeting
5/14/03

Notes of Questions Raised Related to the List of Unresolved Issues from Round 1

In some cases, brief answers were given at the meeting. Since the meeting, DEP staff have added some additional information to help address some of the questions.

However, most questions require further discussion.

A. How "Most at Risk" and "sensitive or threatened" streams are identified

1. What would "at risk" mean? Where would it impact on the ground and what would be the repercussions? Ex. sprawl; inability to develop.
   A: DEP will prepare presentation on proposed criteria for designating "most at risk" streams. Maps of streams proposed for inclusion as "most at risk" were prepared in 2002. They will be looked at to determine if they can be made "printer friendly."
2. Would the list of at risk streams become part of Chapter 502?
   A: Yes.
3. What is the difference between the MCGP list and the 7% list?
   A: The MCGP list includes only impaired waters. The 7% list of streams will include many streams that are not listed as impaired, as well as some (not all) of those that are impaired. The most at risk list would likely include only those impaired, non-attainment streams that include Urban NPS as a source of the impairment (a much smaller list than the MCGP list) as well as streams greater than 7% imperviousness, or some other risk identifying threshold.
4. Did the impervious study identify the contaminant(s) at issue
   A: Chandler Morse's graduate study did evaluate dissolved oxygen levels and nutrient levels as well as condition of the biological community, but was not a comprehensive study of contaminants. The DEP work on the subject falls into several categories. First, over the past decade the macroinvertebrate communities in a number of streams in urban and urbanizing, as well as rural, settings have been evaluated, and a determination made as to whether or not these streams meet the Aquatic Life Criteria for their water quality classification. Recently, the DEP has developed a model that uses information from a 1992 LANDSAT image to estimate the percent imperviousness of watersheds, and using this model DEP has identified streams with estimated watershed imperviousness greater than 5% (the model does discriminate very well below 5%), including a specific estimation of the % imperviousness of each of these stream watersheds. Comparison of the imperviousness estimates with the macroinvertebrate-based class attainment data shows that virtually all the streams with watersheds that are equal to or greater than 10% imperviousness fail to meet Class B aquatic life criteria and many don't meet Class C criteria either, especially as imperviousness gets above 15% to 20 %. There are also some streams with estimated watershed imperviousness less than 10% (i.e. Penjajawoc Stream in Bangor) that fail to meet Class B criteria. In most of these non-attainment cases the Department has not yet collected enough information to identify which of a number of possible causes (contaminants or other causes such as elevated temperatures or habitat modification from excessive storm flow or reduced base flow) is responsible for

the problem with the macroinvertebrate community. The Department is currently in the process of performing such an evaluation on each of the reaches of Long Creek in South Portland, and is planning similar studies (TMDLs) on several other urban streams including Penjajawoc and Birch Streams in Bangor, Trout Brook and Barberry Creek in South Portland and Capisic Brook in Portland.

5. Where is this data available for people to look at? Are you looking at aquatic life or other things too?
   A: The data on attainment of aquatic life criteria based on macroinvertebrate data is available through Leon Tsomides (287-7844 or leon.tsomides@maine.gov). If the data was collected as part of the SWAT (Surface Waters Ambient Toxics) Program, it is probably on the DEP website and Leon could direct you to it. Otherwise, he can produce you a detailed report of the macroinvertebrate data and the model results for any stream you are interested in. Maps showing the results of the imperviousness estimation modeling (all streams with watershed imperviousness estimates greater than 5%) are available as jpegs on the DEP website at www.state.me.us/dep/blwq/docstand/stormwater/impervious.htm.
6. Does the type of development matter? Yes. All imperviousness is not equal. "Connected imperviousness" or impervious areas that drain via conduits to the stream with no unchannelized contact with pervious areas, are more likely to impact the stream than "disconnected imperviousness", which are impervious areas that drain via sheet flow across pervious areas before reaching the stream or a conduit to the stream. A high percentage of the imperviousness in commercial and industrial development is likely to be connected. In purely residential areas, on the other hand, much of the imperviousness is likely to be disconnected. So, in two streams with watersheds that have equal % imperviousness, one principally commercial and the other residential, the commercial stream is more likely to exhibit impairment as a result of the development. One relatively simple way of reducing the impact of new development or retrofitting existing development, especially in areas where the natural soils have reasonable infiltration capacity, is to intersperse the impervious area with pervious areas, effectively disconnecting impervious runoff so some of it can be infiltrated and retained on site.

   Also, certain types of commercial/industrial/transportation imperviousness can export more pollutants than others. Roofs generally tend to be less of a problem than parking and roads. Active parking areas, with a lot of come and go traffic, will export more hydrocarbons, metals and nutrients than low use parking areas. Places where toxics are being regularly handled, such as gas stations, can be particularly hot.

B. Quality standards for impaired streams; and
C. Quality standards for other "most at risk" streams (discussed together)

Staff note: there is some dissatisfaction with the TSS standard, in that it misses the fines which are of the greatest concern. Also, even if one meets the standard, a project may still cause or contribute to the impairment of a waterbody.

1. Have you researched alternatives to the TSS standard?
   A. An alternative is being considered. The alternative would define four levels of post construction quality treatment, and various BMP types meeting certain design standards would be assigned to each level. The level of treatment required for any given site would be a function of the size of the development's new impervious area and the sensitivity of the receiving stream.

2. Would the change affect lakes too?
   A. We don't know yet.
3. It is a broad and difficult question whether discharges can be permitted at all to impaired waters.
   A: Discharges may be permitted provided they do not cause or contribute to the cause of impairment.

D. Quantity standards for streams

Staff note: when we're talking about quantity we're also talking about quality. One impacts the other. The peak flow standard is not adequate. It doesn't address volume changes that destabilize channels.

No questions.

E. Standards for significant discharges from existing development

Staff note: Have to consider these discharges if looking at stream restoration, or if want to make room for new development.

No questions.

F. Maintenance of BMPs/renewal of permits

1. Any discussion of monitoring requirements?
   A: Monitoring requirements have not been discussed.

G. Local management options for addressing sprawl issue

1. Very concerned with this issue (increased costs). Stormwater utility districts?

H. Fees and program administration

1. What are the options? Phase 2 and Chapter 500 -- separate or integrated programs? What is best/easiest for the public?

I. Other?

1. What are your deadlines/timelines?
   A: The DEP is required to report back to the Natural Resources Committee by February 1, 2004. May have draft rules by that time.
2. Will changes to Chapter 500 enable municipalities to more easily handle Phase II (post-construction discharges)?
3. What is the role of monitoring? Performance monitoring?
4. How do the anti-degradation provisions get reflected for non-impaired waterbodies?
5. What about the recent court case concerning affecting the NPDES Program?
   A: DEP is aware of it and is keeping an eye on it. It is not yet resolved.

Legislation

Later note: see bill (LD 1517) and amendment at:
http://www.mainelegislature.org/legis/bills/LD.asp?LD=1570

First cluster of issues -- some comments/questions

1. It would help to know what is driving each issue (ex. local government options).
2. Primary? How id those streams? That is the initial issue.
3. Then quality/quantity
4. Existing development seems separate
5. What outcomes are we looking for?
6. We should identify the outcome first, then identify how we get there.
7. Provide DEP thoughts on options -- use options rather than questions. Use Jeff Dennis' presentation.

GIS/map problem discussed. Size/color/print out from home.

Explain the terms -- impaired, at risk, sensitive/threatened, healthy. Explain the relationship to the MS4/303(d) list.